

REMARKS

Claims 1-20 remain pending in the application. Claims 5 and 7-20 have been withdrawn from consideration by the Examiner, leaving claims 1-4 and 6 for consideration.

Reconsideration of the rejections and allowance of the pending application in view of the foregoing amendment and following remarks are respectfully requested.

In the Office Action of December 2, 2003, claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-83516 to YASUHITO et al. in view of KOTZAB (U.S. Patent No. 4,813,915). This rejection is respectfully traversed.

Independent claim 1 has been amended to more clearly define a structural feature of the invention and to more clearly distinguish over the applied prior art references by further reciting that one end of the torsion coil spring is connected to the base by a recess formed in the bottom of the base and the other end of the torsion coil spring is connected to the rocking arm by a recess formed in the bottom of the rocking arm. Additionally, claim 1 has been amended to define that the recited structural elements necessarily provide a first damping force that is larger than the second damping force as claimed. No new matter is introduced by the present amendment. In this regard, please refer to, inter alia, page 17, lines 19-22 and Fig. 2.

It is a disclosed object of the present invention to provide an autotensioner having an improved damping performance.

To achieve the above-noted object, an autotensioner includes, as recited in amended claim 1, inter alia, a base that has a bottomed tubular shape, a rocking arm that has a tubular part rotatably supported at the inside of the base, a pulley that is attached to one end of the rocking arm, and abuts against a belt, a torsion coil spring that is housed in the base, and biases rotation of the rocking arm in a direction tensioning the belt with respect to the base, and a friction member that is interposed between an outer circumferential surface of the tubular part and an inner circumferential surface of the base. The torsion coil spring is attached eccentrically to the axial center of the base. Further, one end of the torsion coil spring is connected to the base and the other end of the torsion coil spring is connected to the rocking arm. The rocking arm is supported to be able to be displaced relative to the base, such that a first damping force acting on the rocking arm when the belt is tensioned is relatively larger than a second damping force acting on the rocking arm when the belt is slack.

Applicants respectfully submit that the cited references relied upon in the rejection under 35U.S.C. 103(a) do not disclose such a combination of features, or that they would provide a first damping force that is relatively larger than the second damping force.

The Examiner takes the position that YASUHITO et al. shows a tensioner including a base 20, a rocking arm 30 having a tubular part 31, a pulley, a torsion spring 40, and a friction member 60, but fails to show the torsion spring eccentrically attached to the base. The Examiner contends that it would have been obvious to modify the tensioner of YASUHITO et al. to provide a greater biasing force in one direction as taught by KOTZAB. The Examiner further states that "it is apparent" that the first damping force is larger than the second damping force. Regarding claim 6, the Examiner further contends that it would have been obvious to modify the YASUHITO et al. device so that the magnitude of the first damping force is 1.5 to 3.5 times that of the second damping force, since it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art.

However, although KOTZAB patent discloses a torsion spring eccentrically attached to the base, it fails to show a torsion spring eccentrically attached to the base in the manner that one end of the torsion coil spring is connected to the base by a recess formed in the bottom of the base and the other end of the tort coil spring is connected to the rocking arm by a recess formed in the bottom of the rocking arm, as recited in amended claim 1. Further, notwithstanding the Examiner's bald statement, KOTZAB fails to teach or suggest a first damping force larger than a second damping force, or the particular configuration of the base bottom, the friction member, and the rotating arm.

There is nothing in the YASUHITO et al. or KOTZAB documents to suggest combining the references. Moreover, even if one was motivated to make such a combination, the KOTZAB reference fails to show a torsion coil spring attached to a base as in the present invention, nor a first damping force relatively larger than the second damping force, as recited in claim 1, much less a first damping force having a magnitude 1.5 to 3.5 times the magnitude of the second damping force, as recited in claim 6. Furthermore, there is nothing to suggest that, once the teachings of YASUHITO et al. and KOTZAB have been combined, the resulting structure would necessarily result in a device having a first damping force relatively larger than the second damping force.

Thus, even assuming, arguendo, that the teachings of YASUHITO et al. and KOTZAB can be properly combined, the asserted combination of the references would not result in the invention as recited in claim 1.

Independent claim 1 is now in condition for allowance in view of the amendments and the above-noted remarks. Dependent claims 2-4, and 6 are also submitted to be in condition for allowance in view of their dependence from the allowable base claims and also at least based upon their recitations of additional features of the present invention. It is respectfully requested, therefore, that the rejection under 35 U.S.C.103(a) be withdrawn.

Based on the above, it is respectfully submitted that this application is now in condition for allowance, and a Notice of Allowance is respectfully requested.

Should the Examiner have any questions or comments regarding this response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
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